Observations of Occultations of Stars by the Moon, and of Phenomena of Jupiter's Satellites, made at the Royal Observatory, Greenwich, in the Year 1873.

(*Communicated by the Astronomer Royal.*)

Occultations of Stars by the Moon.

Day of Obs. 1873.	Phenomenon.	Telescope.*	Moon's Limb.	Mean Solar Time of Observation. h m s	Observer.
May 1	Disapp. of 39 Geminorum	G. Eq.	Dark	8 22 6·8	C
,,	,, Arg. +26°. No. 1410	,,	,,	8 44 21·8	,,
July 4	,, λ Virginis	Altaz.	,,	10 15 47·0	E
Aug. 9	,, τ^2 Aquarii	G. Eq.	Bright	10 5 5·4	G
Oct. 3	,, τ^2 Aquarii	Altaz.	Dark	7 47 31·5	E
Oct. 13	Reapp. of λ Cancri	E. Eq.	,,	13 0 53·9	C
Dec. 1	Disapp. of *o* Arietis	,,	,,	12 42 54·4	,,
Dec. 24	,, τ^2 Aquarii	Altaz.	,,	4 31 52·7	A D
,,	Reapp. of τ^2 Aquarii	,,	Bright	5 28 51·5	,,
,,	,, τ^2 Aquarii	E. Eq.	,,	5 28 49·8	E

Phenomena of Jupiter's Satellites.

Day of Obs. 1873.	Satellite.	Phenomenon.	Telescope.	Mean Solar Time of Observation. h m s	Mean Solar Time from N. A. h m s	Observer.
Jan. 10	I. (*a*)	Ecl. disapp.	G. Eq.	10 16 4·6	10 15 43·1	H C
,,	II. (*b*)	,,	,,	10 20 39·8	10 20 3·1	,,
,,	IV. (*c*)	Ecl. reapp.	,,	10 54 22·3	10 54 29·2	,,
,,	IV.	Occ. dis. first cont.	,,	13 33 59·1	13 43	,,
,,	IV. (*d*)	,, bisec.	,,	13 40 28·0		
Jan. 26	I. (*e*)	Ecl. disapp.	,,	8 31 11·0	8 30 45·8	W C
Mar. 8	II. (*f*)	,, reapp.	,,	10 2 28·7	10 2 53·8	L
Mar. 13	I.	,, ,,	,,	11 5 48·8	11 6 16·5	E
Mar. 14	III. (*g*)	,, ,,	,,	7 5 42·7	7 5 20·9	A D
,,	I.	Tr. egr. first cont.	,,	7 45 36·2	7 50	H C
,,	I. (*h*)	,, bisec.	,,	7 47 35·9		
,,	I.	,, last cont.	,,	7 49 20·6		
Mar. 22	I. (*i*)	Ecl. reapp.	,,	7 29 8·6	7 29 22·0	A D
Mar. 26	IV. (*k*)	Tr. egr. bisec.	E. Eq.	10 1 20·2	10 7	C
,,	IV.	,, last cont.	,,	10 5 19·6		

* The clear aperture of the object-glass of the Great Equatoreal is $12\frac{3}{4}$ inches, of the East Equatoreal 6·7 inches, and of the Altazimuth $3\frac{3}{4}$ inches.

Day of Obs. 1873.	Satellite	Phenomenon.	Tele-scope.	Mean Solar Time of Observation. h m s	Mean Solar Time from N.A. h m s	Obser-ver.
Mar. 27	I. (*l*)	Ecl. disapp.	G. Eq.	14 55 7·5	14 55 17·8	A D
Mar. 28	III.	Occ. dis. first cont.	,,	7 43 52·8		
,,	III. (*m*)	,, bisec.	,,	7 48 22·1	7 46	W C
,,	III.	,, last cont.	,,	7 52 11·4		
,,	III. (*n*)	,, first cont.	E. Eq.	7 47 9·2	7 46	C
,,	III.	,, last cont.	,,	7 51 38·4		
,,	I.	Tr. egr. first cont.	G. Eq.	11 20 46·7		
,,	I.	,, bisec.	,,	11 22 1·5	11 23	,,
,,	I.	,, last cont.	,,	11 23 46·2		
,,	III.	Occ. reapp. last cont.	,,	11 25 15·9	11 28	,,
,,	III. (*o*)	Ecl. disapp.	,,	11 34 34·4	11 32 1·6	,,
Apr. 9	II. (*p*)	,, reapp.	,,	9 47 9·9	9 47 20·8	H C
Apr. 21	I.	,, ,,	E. Eq.	9 37 6·6	9 37 4·9	C
Apr. 29	I.	Tr. egr. first cont.	G. Eq.	7 37 43·5		
,,	I. (*q*)	,, bisec.	,,	7 39 28·2	7 41	H C
,,	I.	,, last cont.	,,	7 41 57·8		
May 24	IV. (*r*)	Ecl. reapp.	,,	10 48 20·4	10 48 10·4	L

Notes.

(*a*) The first sensible diminution of brightness was noticed $1^m\ 30^s$ before the time recorded above.

(*b*) A diminution of brightness was noticed $2^m\ 30^s$ before the recorded time.

(*c*) The observation was not very satisfactory, owing to cloud; but the observer considers that the time noted is not more than a few seconds late.

(*d*) The satellite had not totally disappeared three minutes after the time recorded at this observation, but *Jupiter* became so tremulous that it was impossible to estimate the time of last contact. Magnifying power used = 310.

(*e*) Bad definition. Power = 285.

(*f*) The satellite was at its full brilliancy about three minutes after the time recorded above. Power = 220.

(*g*) The satellite did not attain its full brightness till six or seven minutes after the recorded time. Power = 310.

(*h*) Observation good; the satellite was distinctly visible on the planet's disk at first contact. Power = 220.

(*i*) The satellite had attained its full brightness three minutes after the time recorded above; both the planet and satellite were very tremulous. Power = 500.

(*k*) Images very bad. Power = 130.

(*l*) The satellite was at its full brightness $2^m\ 37^s$ after the time recorded above; the images were not good, the sky being rather misty. Power = 220.

(*m*) Definition very good, though light passing clouds occasionally made the planet very faint. The observed time of last contact is considered fairly accurate. Power = 310.

(*n*) Satellite faint; sky very thick.

(*o*) The first diminution of light was noticed $2^m\ 35^s$ before the time recorded above.

(*p*) Observation good; the satellite attained its full brightness about three minutes after the time recorded above. Power = 310.

(*q*) Observation good; the satellite at first contact was distinctly seen on the disk of *Jupiter*. Power = 220.

(*r*) The satellite attained its full brilliancy $4^m\ 58^s$ after the time recorded above. Power = 60.

The initials W C, E, C, L, A D, H C, and G, are those of Messrs. Christie, Ellis, Criswick, Lynn, Downing, Carpenter, and Goldney.

Note on a Paper which appeared in the last Supplementary Number of the Monthly Notices (page 533). By Richd. A. Proctor, Esq.

I so far depart from a determination announced last summer, and sufficiently indicated in my last contributions to the *Monthly Notices* of the Royal Astronomical Society, as to send the present Note, the object of which is to express my regret for the circumstances which led to the appearance in the *Monthly Notices* of a paper "On the Antarctic and sub-Antarctic Regions suitable for observing the Transit of 1874." If I had known earlier of the arrangements described by Sir George B. Airy, at the November meeting of the Society, my paper would not have appeared, since in fact it could have served no useful purpose. Those arrangements seem to me to meet the requirements of the occasion as well as can, at the present time, be expected.

I take this opportunity of making three remarks relating to matters mentioned at the November meeting of the Society:—

First, I have never questioned in the slightest degree the energy with which the Astronomer Royal for England is superintending the details of the proposed expeditions.

Secondly, I have not urged as desirable the occupation of any specified stations in Antarctic or sub-Antarctic seas; my suggestions (the justice of which I remain convinced of) have related to the *search* for such stations in due time. These suggestions I regard as calculated, *when they were made*, to be extremely useful.

Thirdly, the above-mentioned essay in the *Monthly Notices* of the Society was accompanied by a foot-note clearly indicating that the paper was inserted on my responsibility alone.

Westminster Hotel, New York,
1873. *December* 26.